Amendments to the Specification

Please replace the title on page 1, line 5 with the following rewritten title:

--**RELATED APPLICATIONS**--

Please replace the paragraph beginning at page 1, line 15 with the following rewritten paragraph:

--Communications systems often involve multiple elements networked together. The network elements, e.g., switches, routers, and signal transfer points, are often required to operate in a manner that complies with one or more standards, e.g., communications protocol standards, which may ser signal timing, fault handling, and message requirements. As networks and communications protocols become more advanced, compliance and interoperability testing becomes more difficult. Realistic testing of network components to determine interoperability and ~~stands~~ standards compliance in situations approaching actual network circumstances has proven to be a difficult task because of the complexity of the chain of events which must be tested for and problems associated with obtaining accurate event timing information. Some of the difficulties associated with testing are a function of differences, e.g., inaccuracies, in the clocks associated with various network ~~compo nets~~ components which monitor for events and provide time stamps corresponding to the time of the detected events. In accuracies in network component clocks make it difficult to accurately compare and sequence events detected at different points in a

network to determine if they occurred in the proper order and within specified times of one another.-

Please replace the paragraph beginning at page 1, line 32 with the following rewritten paragraph:

--IP based networks as well as other communications networks often share the above described interoperability and standards compliance testing problems. A well known network in which such testing problems are frequency encountered is the Public Switched Telephone Network (PSTN). Telephone service providers worldwide use signaling protocols, e.g., Signalling ~~Service~~ System 7 (SS7) protocol to provice the signaling required for communication systems, e.g., SS7, may exist between Service Switching Points (SSPs), Service Control Points, (SCPs), and Signalling Transfer Points (STPs) in a communications network. The SSPs are end sources and destinations for the SS7 messages. The SCPs provide database functions. The STPs switch the SS7 messages on their paths as they travel throughout the system.--

Please replace the paragraph beginning at page 5, line 4 with the following rewritten paragraph:

--In the above described manner, automated testing is made possible in a complex network setting despite clock inaccuracies in network components. Furthermore, testing of extremely large numbers of events and device interactions can be performed in an automated manner in a realistic network setting which might be impossible if the testing and resulting detected events had to be performed

and analyzed by a human operator without the assistance of the automation provided by the present invention.-

Please replace the paragraph beginning at page 9, line 7 with the following rewritten paragraph:

-- Network Configuration Information 218 includes information describing the network configuration used during the testing including and a list of nodes and links monitored. Examples of network configuration information 218 include ~~manufacture~~ manufacturer, type, model, software release version of each STP 116, 118, 120, 122, for each SSP 108, 110, and SCP 106, and a definition of type and length of SS7 links 124 throughout the SS7 network. Network Configuration Information 218 also includes a list of monitoring points for which data was not collected.--

Please replace the paragraph beginning at page 10, line 6 with the following rewritten paragraph:

--The Data Timing Synchronization/Formatting Routine 210 processes the Network Configuration Information 218, the Timing Information 220, and the Raw Test Results 224 in order to generate the Timing Corrected Test Results 22. The timing Corrected test Results 226 is a file consisting of actual event records (AERs) from the test for each event. Data formatting performed in routine 210 is fairly mundane, but nonetheless necessary; The data formatting ensures the consistency of data from all monitors, adjusting for variations in format from different monitor types, and variations in synchronizations of different monitors. Routine 210 integrates the records with multiple

monitors to form asignle actual event record (AER), and filters the AER to remove irrelevant information that may be introduced by STPs 116, 118, 120, 122 that are configured with information (~~print~~ point codes) about nodes that were not configured in the test (to avoid time consuming precise configuration). Rountine 210 also abstracts the numerical form of identifiers used by the monitoring equipment (e.g. point code 246-022-022) into the human friendly symbolic form used in an Expected Behavior (EB), so that the EM and AER are compatible. Finally, it sorts the events in the AER into chronological order, so as to expedite searching during event matching, and adds to each event a 'matched' field that is used by the matching process. The output of this processed AER from routine 210 is the Timing Corrected Test Results 226. with the following rewritten paragraph:--

Please replace the paragraph beginning at page 11, line 7 with the following rewritten paragraph:

--The Analyzer Routine 214 performs event matching by classifying events in the Timing Corrected Expected Results 228 and the Timing Corrected Expected Results 228 and the Timing Corrected Test Results 226. The results of the classification are stored in the Event Classification Results 230. The Event Classification Results data 230 consists of 4 categories: Hidden Event List 234, Missing Event List 236, Matched Event Record 238, or Unexpected Event List 240. The Analyzer Routine 214 also generates a Parameter Observation List 231. The Parameter Observation list 231 includes information that indicates how long the STP ~~should~~ did wait before causing a subsequent event.—

Please replace the paragraph beginning at page 14, line 24 with the following rewritten paragraph:

--Exemplary Generic Commands ~~and corresponding stimuli~~ are:

fail_link( ), restore-link( ) : fail or restore a specific link in the network configuration, set_load ( ) : set the load on a particular link to a particular level, and
pause ( ) : wait a certain period (e.g., to allow network traffic to stabilize) before injecting the next stimulus.—

Please replace the paragraph beginning at page 15, line 13 with the following rewritten paragraph:

--The messages that an STP transmits on the links are the most common measure of the response of an STP, and the EB may be concerned with the type and parameters of a specific message, or with the aggregate volume of messages flowing over a particular path. The EM includes findmsg ( ) commands to find a message with particular properties (e.g., type and originating and destination point codes) passing over a certain link or an arbitrary link, and assert_load ( ) commands to check whether the load on a link is within a specified tolerance on of a certain level. The STP's log of events ~~is~~ that it observes is another important response, since accurate logs help alert network operators of imminent problems, and help problem diagnostics.—